Credit Name: CSE 2140 2nd Language Programming
Assignment Name: Election Mastery
How has your program changed from planning to coding to now? Please explain?

PLANNING:

I planned to declare and initialize the variables that are going to be used in the program, ask user for amount of votes casted for each candidate in each city, calculate the total votes, calculate the percentage of votes for each candidate, and lastly print out the amount of votes and percentage of vote for each candidate, as well as the total votes casted.

CODING:

1. Program starts with declaring the main variables that will be used throughout the program.

```
int Awbrey = 0;
int Martinez = 0;
int totalvote = 0;
```

2. "Deca" is set in a Decimal Format of #.##
   We will use deca when printing the percentage of vote as a decimal number later on in the code.
   Scanner is set to prepare for the user inputs coming up.

```
DecimalFormat deca = new DecimalFormat("#.##");

//preparing for user input
        Scanner userInput = new Scanner(System.in);
```

3. Basic intro message is printed, then the program starts asking the user for input numbers. These numbers are then stored in the appropriate variable

```
// print introduction messages
    System.out.println("Please enter the number of votes casted for each candidate in each city");

    //collect user input and store in the appropriate variable

    System.out.println("Election results for New York:");

    System.out.println("Awbrey:");
            Awbrey+= userInput.nextInt();

    System.out.println("Martinez:");
            Martinez+= userInput.nextInt();

    System.out.println("Election results for New Jersey:");

    System.out.println("Awbrey:");
            Awbrey += userInput.nextInt();

    System.out.println("Martinez:");
            Martinez+= userInput.nextInt();

    System.out.println("Election results for Connecitcut:");

    System.out.println("Awbrey:");
            Awbrey += userInput.nextInt();

    System.out.println("Martinez:");
            Martinez+= userInput.nextInt();
```

4. Next is computation, and we need to calculate 3 things : total number of votes, and percentage of vote for both Awbrey and Martinez. Total vote is found by adding the total votes for each candidate. Percentage of vote is found for each candidate by taking their individual number of votes, dividing it by the total votes, then multiplying by 100.

```
//Calculate the total votes casted:
totalvote = Awbrey+Martinez;

// calculate the percentage of votes casted for each person:
  double AwbreyT = (Double.valueOf(Awbrey) / Double.valueOf(totalvote))*100;

  double MartinezT = (Double.valueOf(Martinez) / Double.valueOf(totalvote))*100;
```

5. The final step is printing the output. I printed the output in a format that looks like a table. The headings for the table include “Candidate, Votes, and Percentage.” Under candidate, the names of the candidates are shown. Under votes, the total votes for each candidate are shown. Under percentage, the vote percentage for the candidate that we calculated in the last step is shown. After the table, a section displays the total votes casted.

```
//print output values that were calculated above:
  System.out.println("Candidate       Votes     Percentage");

  System.out.println("Awbrey          " + Awbrey   + "      " + deca.format(AwbreyT) + "%" );

  System.out.println("Martinez        " + Martinez + "      " + deca.format(MartinezT) + "%" );

  System.out.println("TOTAL VOTES:    " + totalvote);
```

End of program!